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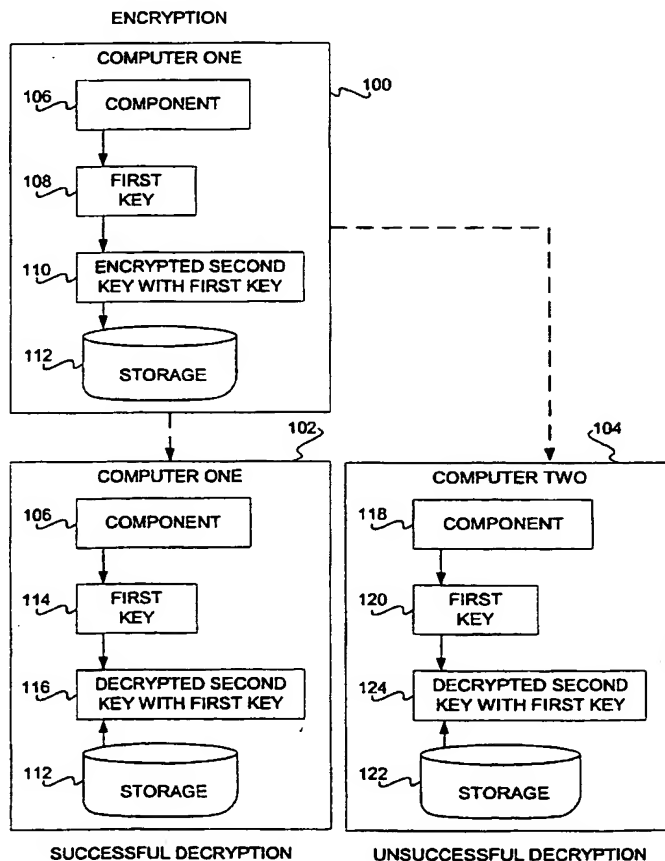
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[Continued on next page]

(54) Title: KEY ENCRYPTION USING CLIENT-UNIQUE ADDITIONAL KEY



(57) Abstract: Encryption of a key using another key that is unique and particular to a given client is disclose. In one embodiment, a computer-implemented method determines a first key that is unique and particular to the client, without user intervention. In varying embodiments, this key can be one or more of: a processor identifier, a network card address, an IP address, a checksum of a component, a serial number of a hard disk drive, a number of cylinders of a hard disk drive, and a user name in a registry file. At least a second key that provides access to information, such as multimedia information, is encrypted with this first key. The second key as encrypted with the first key may be stored on a storage.

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/29184

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04L9/08 G06F1/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, PAJ, EPO-Internal, IBM-TDB, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 933 497 A (CORRIGAN MICHAEL JOSEPH ET AL) 3 August 1999 (1999-08-03) column 4, paragraph 1 column 5, line 44 - line 50 column 7, line 23 - line 26 column 9, line 21 - last line ---	1,2,5,6
X	US 5 337 357 A (CHOU WAYNE W ET AL) 9 August 1994 (1994-08-09) column 1, line 45 -column 2, line 3 column 2, line 57 -column 4, line 37 abstract -----	1,2,5,6

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

8 March 2001

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14. 06 2001

Name and mailing address of the ISA

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HOLPER, G

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 00/29184

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-6

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-6

A method for a client comprising the steps of determining a first key unique to the client and of encrypting and storing at least a second key with the first key.

2. Claims: 7-9

A method for determining a checksum for at least one of a player and an information, comparing the checksum against a target value and indicating a checksum error.

3. Claims: 10-13

A method for checking a system indicator against a signature database of known piracy mechanisms and for preventing playback.

4. Claims: 14-16

A method for varying, during playback of multimedia information, at least one of inputs and outputs to prevent unauthorized copying of the multimedia information.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. l. Application No

PCT/US 00/29184

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5933497 A	03-08-1999	JP 2066371 C	24-06-1996
		JP 5334072 A	17-12-1993
		JP 7099497 B	25-10-1995
US 5337357 A	09-08-1994	CA 2120816 A	18-12-1994
		EP 0636962 A	01-02-1995